Notice of Allowability	Application No.	Applicant(s)	
	09/665,721	SAMRA, SUKENDEEP	
	Examiner	Art Unit	
	Tam D Tran	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *papers received on 1/14/2005*.

2. ☒ The allowed claim(s) is/are *4-14, 18-28, 32-42, 46-56*.

3. ☒ The drawings filed on *18 September 2000* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffery Scott Heileson, Reg. No. 46765 on 05/09/2005.

2. IN THE CLAIMS:

Delete claims 1-3, 15-17, 29-31, 43-45.

In claim 8, line 1, delete "1" and replace with - - 4 - -

In claim 13, line 1, delete "2" and replace with - - 9 - -

In claim 22, line 1, delete "15" and replace with - - 18 - -

In claim 28, line 1, delete "13" and replace with - - 27- -

In claim 36, line 1, delete "29" and replace with - - 32 - -

In claim 50, line 1, delete "43" and replace with - - 46 - -

In claim 4, delete "The method of claim 3 wherein selecting a portion comprises: locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; locating a first horizontal line of pixels with at least one pixel having non-zero opacity

closest to the origin of the current image; locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; and storing data specifying the active region of the current image."

And replace with - - A method comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data; and

storing autocrop data for each key frame of the sequence of images;

wherein preparing autocrop data comprises determining the active region of a current image of the sequence of images;

wherein determining the active region comprises selecting a portion of the current image as the active region of the current image such that all pixels outside the active region have no opacity;

wherein selecting a portion comprises locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, and storing data specifying the active region of the current image. - -

In claim 9, delete " The method of Claim 8 wherein determining comprises:

determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame."

And replace with - - A method comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data;

storing autocrop data for each key frame of the sequence of images;

determining which images of the sequence of images are key frames, wherein determining comprises:

determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame. - -

In claim 18, delete "The machine readable medium of claim 17 wherein selecting a portion causes the machine to perform operations comprising: locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; and storing data specifying the active region of the current image."

And replace with - - A machine readable medium having stored thereon instructions which when executed by a processor cause the machine to perform operations comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data; and

storing autocrop data for each key frame of the sequence of images;

wherein preparing autocrop data causes the machine to perform operations comprising determining the active region of a current image of the sequence of images;

wherein determining the active region data causes the machine to perform operations comprising selecting a portion of the current image as the active region of the current image such that all pixels outside the active region have no opacity;

wherein selecting a portion causes the machine to perform operations comprising

locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, and storing data specifying the active region of the current image. - -

In claim 23, delete " The machine readable medium of claim 22 wherein determining causes the machine to perform operations comprising: determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame."

And replace with - - A machine readable medium having stored thereon instructions which when executed by a processor cause the machine to perform operations comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data; and

storing autocrop data for each key frame of the sequence of images;

determining which images of the sequences of image are key frames, wherein determining causes the machine to perform operations comprising:

determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame. - -

In claim 32, delete "The system of claim 31 wherein selecting a portion causes the system to perform operations comprising: locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; and storing data specifying the active region of the current image."

And replace with - - A system comprising:

a processor coupled to a bus;

a memory coupled to the bus;

a storage device coupled to the bus, the storage device having stored thereon instructions which when executed by the processor cause the system to perform operations comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data; and

storing autocrop data for each key frame of the sequence of images on the storage device;

wherein preparing autocrop data causes the system to perform operations comprising determining the active region of a current image of the sequence of images;

wherein determining the active region data causes the system to perform operations comprising selecting a portion of the current image as the active region of the current image such that all pixels outside the active region have no opacity;

wherein selecting a portion causes the system to perform operations comprising locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, and storing data specifying the active region of the current image. - -

In claim 37, delete "The system of Claim 36 wherein determining causes the system to perform operations comprising: determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame."

And replace with - - A system comprising:

a processor coupled to a bus;

a memory coupled to the bus;

a storage device coupled to the bus, the storage device having stored thereon instructions which when executed by the processor cause the system to perform operations comprising:

preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data; and

storing autocrop data for each key frame of the sequence of images on the storage device;

determining which images of the sequence of images are key frames, wherein determining causes the system to perform operations comprising:

determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

determining whether smoothing is needed, and, if so, designating the current image as a key frame. - -

In claim 46, delete " the apparatus of claim 45 wherein the means for selecting a portion comprises: means for locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; means for locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; means for locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image; means for locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image; and means for storing data specifying the active region of the current image."

And replace with - - An apparatus comprising:

means for preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data;

means for storing autocrop data for each key frame of the sequences of images;

wherein the means for preparing autocrop data comprises means for determining the active region of a current image of the sequence of images;

wherein the means for determining the active region comprises means for selecting a portion of the current image as the active region of the current image such that all pixels outside the active region have no opacity;

wherein the means for selecting a portion comprises means for locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, means for locating a second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, means for locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, means for locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, and means for storing data specifying the active region of the current image. - -

In claim 51, delete "The apparatus of Claim 50 wherein the means for determining comprises: means for determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame; means for determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and means for determining whether smoothing is needed, and, if so, designating the current image as a key frame."

And replace with - - An apparatus comprising:

means for preparing autocrop data for each image of a sequence of images, each image comprising a frame of video data;

means for storing autocrop data for each key frame of the sequences of images;

means for determining which images of the sequence of images are key frames, wherein the means for determining comprises:

means for determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame;

means for determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and

means for determining whether smoothing is needed, and, if so, designating the current image as a key frame. - -

Allowable Subject Matter

3. Claims 4-14, 18-28, 32-42, 46-56, are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art shows autocroping for images but does not disclose wherein determining the active region comprises selecting a portion of the current image as the active region of the current image such that all pixels outside the active region have no opacity;

wherein selecting a portion comprises locating a first vertical line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a

second vertical line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, locating a first horizontal line of pixels with at least one pixel having non-zero opacity closest to the origin of the current image, locating a second horizontal line of pixels with at least one pixel having non-zero opacity furthest from the origin of the current image, and storing data specifying the active region of the current image.

The closest prior art shows autocroping for images but does not disclose determining which images of the sequence of images are key frames, wherein determining comprises: determining whether the current image is the first frame of the sequence of images, and, if so, designating the current image as a key frame; determining whether the active region of the current image is outside the active region of a prior image, and, if so, designating the current image as a key frame; and determining whether smoothing is needed, and, if so, designating the current image as a key frame.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tam D. Tran** whose telephone number is **571-272-7793**. The examiner can normally be reached on MON-FRI from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella** can be reached on **571-272-7778**. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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